

PATENT
Docket No.: SK00002C1(00CXT0656C1)
10/691,115

REMARKS

STATUS SUMMARY

Claims 1-27 are pending in the present application. Claim 24 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. The Examiner has rejected claims 1-5, 8, 10, 11-15, 18, 20-23, 25 and 27 under 35 U.S.C § 102(b) as being anticipated by *Wong* (U.S. Pat. No. 5,760,651), and has also rejected claims 6, 7, 11, 16, 17 and 26 under 35 U.S.C §103(a) as being unpatentable over *Wong*. Claims 9 and 19 are allowable if rewritten in independent form including all limitations of the base claim and any intervening claims.

These formal matters identified in the Office Action are addressed herein below.

RESPONSE TO CLAIM REJECTION UNDER 35 USC § 112

The Examiner has rejected claim 24 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Specifically, the Examiner has questioned the use of the phrase “predetermined ration.” Applicants have amended claim 24 so that this phrase now reads “predetermined ratio.”

Claims 5, 15, 25 and 26 have also been amended to make minor grammatical corrections and make the claims better conform to the specification as originally filed.

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The above-noted amendments to claims 5, 15, 24, 25 and 26 are believed to be fully supported by the specification as originally filed. Accordingly, no new matter is believed to have been added by these amendments.

In view of the foregoing, Applicants respectfully submit that the rejection of claim 24 has now been overcome, and therefore request that the Examiner's rejection be withdrawn at this time.

RESPONSE TO CLAIM REJECTIONS UNDER 35 USC § 102(b)

The Examiner has rejected claims 1-5, 8, 10, 11-15, 18, 20-23, 25 and 27 under 35 U.S.C §102(b) as being anticipated by the *Wong* patent (U.S. Pat. No. 5,760,651). MPEP § 2131 provides:

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). ... "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim, ...

The *Wong* patent does not teach each and every claimed element of claims 1-5, 8, 10, 11-15, 18, 20-23, 25 and 27. Therefore, Applicants respectfully traverse these rejections.

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CLAIM 1

Claim 1 discloses:

A constant current bias circuit comprising:
an at least one resistor; and
a bias voltage input terminal for receipt of a bias voltage connected to the
at least one resistor by an electrical path resulting in a bias current when the bias
voltage is present.

The Examiner states: "[r]egarding claims 1, 11, *Wong* (Figs. 3 or 4) discloses a
biasing circuit comprising: a resistor (24); a bias voltage input terminal (V_B) connected to
the resistor (24) having the inherent function."

In response, Applicants respectfully disagree that the *Wong* patent teaches each
and every aspect of the claimed invention in claim 1 either explicitly or impliedly as
required under 35 U.S.C. § 102(b) and MPEP §§ 706 and 2131. As noted by the
Examiner, FIG. 3 of the *Wong* patent show a biasing circuit where the voltage source for
providing the voltage source V_B includes a resistor 24 coupled between a power supply
node V_{CC} and V_B , and a diode 26 and capacitor 28 connected between V_B and ground
(col. 2, lines 63-66), with the diode 26 of FIG. 3 replaced by a diode-connected transistor
26a in FIG. 4 (col. 3, lines 19-23).

The claimed invention of claim 1 is a constant current bias circuit comprising an
at least one resistor; and a bias voltage input terminal for receipt of a bias voltage
connected to the at least one resistor by an electrical path. The *Wong* patent does not set
forth each and every element of claim 1, either expressly or inherently. Specifically, the

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Wong patent does not describe a biasing circuit that *result[s] in a bias current* when a bias voltage is present at a bias voltage terminal.

The claimed invention in particular relates to constant current biasing circuits (page 1, lines 25-26) and the second limitation of claim 1 refers to "a bias voltage input terminal for receipt of a bias voltage connected to the at least one resistor by an electrical path *resulting in a bias current* when the bias voltage is present." This element, i.e., a bias circuit resulting in a bias current, is not disclosed anywhere in the *Wong* patent.

First, the *Wong* patent is related to "an inductorless voltage biasing circuit for an AC-coupled amplifier," (col. 4, line 21), as opposed to biasing provided by a current-mode biasing scheme (col. 1, lines 10-12). Thus the *Wong* patent expressly distinguishes its biasing circuits from those of a current-mode biasing scheme and states why a voltage-mode biasing scheme (col. 1, lines 12-18) is preferable. It therefore follows that the *Wong* patent would not disclose or describe all of the elements of a biasing circuit that results in a bias current.

Therefore, the *Wong* patent clearly fails to disclose or describe all of Applicants' claim limitations in independent claim 1. Thus independent claim 1 is in condition for allowance.

CLAIMS 2-5, 8 and 10

Claims 2-5, 8 and 10 are dependent on allowable claim 1. Therefore, Applicants believe that claims 2-5, 8 and 10 are also in a condition for allowance and respectfully request that the Examiner withdraw the rejections of these claims.

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CLAIM 11

Claim 11 discloses:

A constant current bias circuit comprising:
an at least one resistor; and
means for receiving a bias voltage connected to the at least one resistor by
an electrical path resulting in a bias current when the bias voltage is present.

The Examiner states: "[r]egarding claims 1, 11, *Wong* (Figs. 3 or 4) discloses a biasing circuit comprising: a resistor (24); a bias voltage input terminal (V_B) connected to the resistor (24) having the inherent function."

In response, Applicants respectfully disagree that the *Wong* patent teaches each and every aspect of the claimed invention in claim 1 either explicitly or impliedly as required under 35 U.S.C. § 102(b) and MPEP §§ 706 and 2131. As noted by the Examiner, FIG. 3 of the *Wong* patent show a biasing circuit where the voltage source for providing the voltage source V_B includes a resistor 24 coupled between a power supply node V_{CC} and V_B , and a diode 26 and capacitor 28 connected between V_B and ground (col. 2, lines 63-66), with the diode 26 of FIG. 3 replaced by a diode-connected transistor 26a in FIG. 4 (col. 3, lines 19-23).

The claimed invention of claim 11 is a constant current bias circuit comprising an at least one resistor; and means for receiving a bias voltage connected to the at least one resistor by an electrical path. The *Wong* patent does not set forth each and every element of claim 11, either expressly or inherently. Specifically, the *Wong* patent does not describe a biasing circuit that includes means for receiving a bias voltage connected to

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the at least one resistor by an electrical path *resulting in a bias current* when the bias voltage is present.

The claimed invention in particular relates to constant current biasing circuits (page 1, lines 25-26) and the second limitation of claim 11 refers to “means for receiving a bias voltage connected to the at least one resistor by an electrical path *resulting in a bias current* when the bias voltage is present.” This element, i.e., a means for receiving a bias voltage connected to the at least one resistor by an electrical path *resulting in a bias current* is not disclosed anywhere in the *Wong* patent.

First, the *Wong* patent is related to “an inductorless voltage biasing circuit for an AC-coupled amplifier,” (col. 4, line 21), as opposed to biasing provided by a current-mode biasing scheme (col. 1, lines 10-12). Thus the *Wong* patent expressly distinguishes its biasing circuits from those of a current-mode biasing scheme and states why a voltage-mode biasing scheme (col. 1, lines 12-18) is preferable. It therefore follows that the *Wong* patent would not disclose or describe all of the elements of a biasing circuit that results in a bias current.

Therefore, the *Wong* patent clearly fails to disclose or describe all of Applicants’ claim limitations in independent claim 11. Thus independent claim 11 is in condition for allowance.

CLAIMS 12-15, 18 and 20

Claims 12-15, 18 and 20 are dependent on allowable claim 11. Therefore, Applicants believe that claims 12-15, 18 and 20 are also in a condition for allowance and respectfully request that the Examiner withdraw the rejections of these claims.

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CLAIM 21

Claim 21 discloses:

A method for current bias circuit, comprising:
receiving an input bias voltage; and
generating a bias current by at least one resistor being in receipt of the
input bias voltage.

The Examiner states: “[r]egarding claims 1, 11, *Wong* (Figs. 3 or 4) discloses a
biasing circuit comprising: a resistor (24); a bias voltage input terminal (V_B) connected to
the resistor (24) having the inherent function.” Claim 21 is a method claim presumably
rejected for the same reasons as claims 1 and 11.

In response, Applicants respectfully disagree that the *Wong* patent teaches each
and every aspect of the claimed invention in claim 21 either explicitly or impliedly as
required under 35 U.S.C. § 102(b) and MPEP §§ 706 and 2131. As noted by the
Examiner, FIG. 3 of the *Wong* patent show a biasing circuit where the voltage source for
providing the voltage source V_B includes a resistor 24 coupled between a power supply
node V_{CC} and V_B , and a diode 26 and capacitor 28 connected between V_B and ground
(col. 2, lines 63-66), with the diode 26 of FIG. 3 replaced by a diode-connected transistor
26a in FIG. 4 (col. 3, lines 19-23).

The claimed invention of claim 21 is a method for constant current bias circuit
comprising receiving an input bias voltage and generating a bias current by at least one
resistor being in receipt of the input bias voltage. The *Wong* patent clearly does not set
forth the second element of claim 21, i.e., generating a bias current.

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The claimed invention in particular relates to constant current biasing circuits (page 1, lines 25-26) and the second limitation of claim 21 refers to “*generating a bias current.*” This step of generating a bias current is not disclosed anywhere in the *Wong* patent.

First, the *Wong* patent is related to “an inductorless voltage biasing circuit for an AC-coupled amplifier,” (col. 4, line 21), as opposed to biasing provided by a current-mode biasing scheme (col. 1, lines 10-12). Thus the *Wong* patent expressly distinguishes its biasing circuits from those of a current-mode biasing scheme and states why a voltage-mode biasing scheme (col. 1, lines 12-18) is preferable. It therefore follows that the *Wong* patent would not disclose or describe all of the elements of a biasing circuit that results in a bias current.

Therefore, the *Wong* patent clearly fails to disclose or describe all of Applicants’ claim limitations in independent claim 21. Thus independent claim 21 is in condition for allowance.

CLAIMS 22-23, 25 and 27

Claims 22-23, 25 and 27 are dependent on allowable claim 21. Therefore, Applicants believe that claims 22-23, 25 and 27 are also in a condition for allowance and respectfully request that the Examiner withdraw the rejections of these claims.

RESPONSE TO CLAIM REJECTIONS UNDER 35 USC § 103(a)

The Examiner has rejected claims 6, 7, 16, 17 and 26 under 35 U.S.C § 103(a) as being unpatentable over *Wong* (U.S. Pat. No. 5,760,651). Specifically, the Examiner

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acknowledges that *Wong* does not disclose the type of transistor used and that it would have been an obvious matter of design choice to replace the transistors of the reference circuit with a Complementary Metal Oxide Semiconductor ("CMOS") or Gallium Arsenide Semiconductor.

Applicants respectfully traverse these rejections. First, Applicants believe, for the reasons stated in response to the rejection of claims 1, 11 and 21 under 35 U.S.C §102(b), that even if *Wong* and the elements disclosed in claims 6, 7, 16, 17 and 26 were combined, the combination would not teach all of elements of these claims. In other words, *Wong* does not anticipate claims 1, 11 or 21, and therefore, cannot anticipate claims 6, 7, 16, 17 or 26 when combined with appropriate additional element; i.e., a CMOS or Gallium Arsenide Semiconductor.

Moreover, Applicants believe that the Examiner has failed to establish a *prima facie* case of obviousness as required by 35 U.S.C. §103(a), the applicable case law and MPEP §2142 because the Examiner has failed to show all of the following: 1) a motivation or suggestion to combine *Wong* and the additional elements, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference (i.e., *Wong*) or to combine reference teachings; 2) a reasonable expectation of success; and 3) that *Wong* and the additional elements when combined teach or suggest all the claim limitations.

The MPEP § 2142 specifically states that the "examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness. If the examiner does not

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produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness.” Additionally, MPEP § 2142 also states that the “initial burden is on the examiner to provide some suggestion of desirability of doing what the inventor has done. “To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.” Official notice unsupported by documentary evidence should only be taken by the examiner when the facts asserted to be well-known, or to be common knowledge in the art are capable of instant and unquestionable demonstration as being well-known. MPEP § 2144.03 A.

Specifically, the Examiner has failed to show that there is a suggestion or motivation to replace the transistors of *Wong* with a CMOS or Gallium Arsenide Semiconductor.

Based on the foregoing, Applicants respectfully submit that Examiner’s statements regarding the combination of *Wong* and the other features known in the art are without foundation and cannot support a *prima facie* conclusion of obviousness.

RESPONSE TO CLAIMS OBJECTED TO
AS BEING DEPENDENT UPON A REJECTED BASE CLAIM

The Examiner has objected to claims 9 and 19 as being dependent upon a rejected base claim, but has stated that claims 9 and 19 would be allowable if re-written in

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independent form including all of the limitations of the base claim and any intervening claims.

In response, Applicants thank the Examiner for allowing claims 9 and 19; however, Applicants believe that re-writing claims 9 and 19 in independent form is not necessary at this time because, as stated above, the *Wong* patent fails to teach or describe all of Applicants' claim limitations in independent claims 1, 11 and 21. Thus, independent claims 1, 11 and 21 are in condition for allowance, and dependent claims 9 and 19 that depend from allowable independent claims 1 and 11, respectively, are also in condition for allowance.

Therefore, Applicants respectfully request that the Examiner withdraw the objections to claims 9 and 19 because said claims are in condition for allowance.

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CONCLUSION

In light of the above amendments and remarks, it is respectfully submitted that the present application is now in proper condition for allowance, and an early notice to such effect is earnestly solicited.

If any small matter should remain outstanding after the Patent Examiner has had an opportunity to review the above Remarks, the Patent Examiner is respectfully requested to telephone the undersigned patent attorney in order to resolve these matters and avoid the issuance of another Official Action.

Respectfully submitted,
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